REMARKS

Applicants would like to thank the Examiner for the thorough examination of the present application. Arguments supporting patentability of the claims are provided below.

I. The Claimed Invention

The present invention, as recited in independent Claim 1, for example, is directed to a screening method for at least two binding partners, which comprises labeling each binding partner with a fluorophore, characterized in that the at least two fluorophores have substantially the same single-photon excitation wavelength and different emission wavelengths. The method further comprises detecting emission signals from the respective fluorophores at the different respective emission wavelengths, and processing the detected emission signals to obtain fluorescence correlation spectroscopic data for screening the binding partners.

Independent Claim 15 is similar to independent Claim 1, and is directed to a biological screening apparatus for screening at least two binding partners.

II. The Claims Are Patentable

The Examiner rejected independent Claims 1 and 15 over the Heinze et al. published patent application. Heinze et al. is directed to a method and device for multicolor 2-photon fluorescence coincidence analysis. More particular, reference is directed to paragraph 9 of Heinze et al., which provides:

> "The basic idea of the present invention is, for correlation fluorescence measurement on analytes having at least two fluorescent markers on one or more materials to be analyzed, to illuminate the sample with a excitation intensity (photon flux density) sufficiently high that the fluorescence excitation of the fluorescent marker occurs through 2-photon absorption. The sample is preferably illuminated using solely one single laser line. The laser beam is focused on the desired location of the measurement volume in the sample. The fluorescent markers are excited simultaneously at a shared excitation wavelengths, but have spectrally separate fluorescence emissions, which are detected using different detectors. The signals of the detectors are subjected to a correlation analysis (coincidence or cross-correlation analysis). 2-photon excitation of fluorescent markers has the advantage that fluorescent markers may be used which have similar maxima in the excitation spectra of the 2-photon excitation, but are distinguished by different Stokes shifts of the emission." (Emphasis added).

In sharp contrast, independent Claim 1 recites that each binding partner is labeled with a fluorophore, characterized in that the at least two fluorophores have substantially the same single-photon excitation wavelength and different emission wavelengths.

In Heinze et al., a 2-photon excitation processes is used on the fluorescence markers. As hightlighted above, paragraph 9 states that ". . . the fluorescence excitation of the

fluorescence marker occurs through 2-photon absorption. A two-photon excitation of fluorescence markers has the advantage that the fluorescence markers may be used which have similar maxima in the excitation spectra of the 2-photon excitation, . . ."

Reference is also directed to paragraphs [0038] to [0040] in Heinze et al., where again it is explicitly disclosed that the fluorescence markers operate through a 2-photon excitation. Figure 5 explicitly shows experimental results confirming the 2-photon processes in the fluorescence markers in a double logarithmic representation with a corresponding linearized form having a slope of 2.

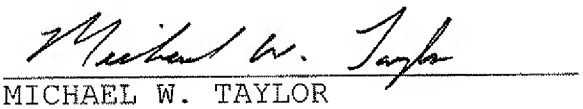
Accordingly, Applicants submit that independent Claim 1 is patentable over Heinze et al. Furthermore, there is simply no motivation, teaching or suggestion to modify the 2-photon processes in Heinze et al. to a 1-photon process as in the claimed invention. Applicants respectfully submit that a person skilled in the art would not have arrived at the claimed invention from the disclosure in Heinze et al. without exercising an inventive step.

Independent Claim 15 is similar to independent Claim 1. Therefore, it is submitted that this claim is also patentable over Heinze et al. In view of the patentability of independent Claims 1 and 15, it is submitted that the dependent claims, which include yet further distinguishing features of the invention are also patentable. These dependent claims need no further discussion herein.

III. CONCLUSION

In view of the arguments provided herein, it is submitted that all the claims are patentable. Accordingly, a Notice of Allowance is requested in due course. Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,



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